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Kinya Washino

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EXAMINER

KOSTAK, VICTOR R

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,046

Applicant(s)

WASHINO ET AL.

Examiner

Victor R. Kostak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 256,258-263,265-274,276,278-285 and 287-319 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 256,258-263,265-274,276,278-285 and 287-319 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>08/05/02</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. It is first noted that there is a different examiner now in charge of the instant application.
2. It is also noted that all of the pending claims are new relative to any of the claims previously examined, and addressed in the protests prior to 12/03/04. However, certain points made by the previous examiner in his Office action and issues raised in all of the protests filed that remain pertinent to the current claims have been considered and reapplied (as seen fit) in this action by the current examiner. With this, applicant's remarks in the amendments have been reviewed to the extent to how they too may apply to the current claims.
3. Applicant has canceled all claims subsequent to the first Office action of 11/26/03 and submitted new claims in the amendment of 03/11/05, which claims were further amended and added to on 10/03/05, as noted above. Only those claims that pertain to the originally-elected and ultimately-patented invention (i.e. multi/format production system involving format conversion) have been examined based on constructive election by original presentation.
4. Applicant is not in compliance with rule 177(a) because the first sentence of the specification does not identify the other applications filed as reissue continuations of the same parent application.
5. Applicant is also not in compliance with rule 173(b)(2) because claims 260-263, 278-280, 287 and 288 are not accounted for (and assumed canceled) in the amendment of 10/03/05.

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6. Claims 256, 258, 259, 265-274, 294-303 and 312-315 are objected to because of the following informalities:

(1) in line 9 of amended claim 256, "their" should be changed to -- the --; and

(2) the deletion of "an" in line 9 of claim 312 is not in compliance with rule 173.

Appropriate correction is required.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 317-319 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 18 of claim 317 "a graphics processor" has ambiguous antecedence because "graphics processor" (no article) is initially recited in line 3. Furthermore, it does not look like graphics processor 116 (not numerically labeled in the Figure) actually carries out the RGB processing because only stage 120 is disclosed as doing that processing (col. 11 lines 13-23), which stage is a standard/widescreen interface to the graphics processor.

Dependent claim 318 recites "a graphics processor" that has ambiguous antecedence to either of the graphics processors previously recited in base claim 317.

8. The reissue oath/declaration filed on 03/11/05 is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414.

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It is first noted that the declaration of 03/11/05 is not signed by one of the inventors (Schwab).

Addressing the substance of the declaration, the supplemental declaration fails to identify which claims have errors (see MPEP 1414 II (c)).

Furthermore, the stated error to be corrected by reissue (i.e. "an audio/visual method wherein editing is performed ... frame rate of substantially 24 fps") is directed to an invention restrictable from the originally elected subcombination claimed in the '157 patent, and therefore not correctable by reissue (see MPEP 1412.01). The originally elected claims were directed to converting a image into multiple formats, which is different from what was said to be the error.

Moreover, after the submittal of the declaration of 03/11/05 a subsequent (third) preliminary amendment has been submitted (though not in response to any type of action) dated 10/03/05 which includes further amended claims as well as additional claims. The basis for filing those claims has not been explained in accordance with 35 USC 251 and there is no supplemental declaration accounting for the changes that constitute errors based on 35 USC 251.

In accordance with 37 CFR 1.175(b)(1), a supplemental reissue oath/declaration under 37 CFR 1.175(b)(1) must be received before this reissue application can be allowed.

9. Claims 256-259, 264-277, 281-286 and 289-319 are therefore rejected as being based upon a defective reissue declaration under 35 U.S.C. 251. See 37 CFR 1.175. The nature of the defect is set forth above.

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10. Claims 256-259, 264-277, 281-286 and 289-319 are also rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001); *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to claim subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope of claim subject matter surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

Applicant has broadened language that was previously surrendered during prosecution of the original application critical to issuance of the of the claims in original application. In the amendment of 08/11/95, applicant specifically and explicitly in an effort to overcome patent 5,243,433 to Hailey. Applicant states in that amendment that Hailey “*neither implies nor suggests (1) the use of such an intermediate format nor (2) does Hailey include any means for the storage of images, temporarily or permanently during conversion directly from an input format to an output format.*” It is further noted that the intermediate format, as claimed, explicitly involves “a graphics processor.” The claims were allowed upon entry of this express claim language.

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None of new independent claims 256, 276, 285, 312 and 317 recites essentially expressly (1) *the use of such an intermediate format nor* (2) *does Hailey include any means for the storage of images, temporarily or permanently during conversion directly from an input format to an output format* expressly involving a graphics processor. Claims 256, 285 and 312 do not even recite a graphics processor let alone the association with an intermediate format or direct storage from an input to an output during conversion. Only claims 276 and 317 recite a graphics processor but fail to recite or imply inclusion of the intermediate format and the input/output storage relationships (see further MPEP 1412.02).

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 256-259, 264-277, 281-286 and 289-319 are also rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In line 9 of new claim 256, applicant now recites performing “non-linear editing” on the video information and the audio information (in an apparent attempt to characterize the embodiment shown in Fig. 4). Only one time in the entire disclosure is “non-linear editing” mentioned, and that is in passing. That text states that “*techniques such as non-linear editing, animation, and special effects will benefit from the implementation of this system.*” Nowhere is

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non-linear editing disclosed in the context of any circuit arrangement, nor are its benefits elaborated on or later disclosed anywhere. Applicant now recites such a step in method claim 256 in specific relationship with other steps. Nowhere does applicant follow up in the disclosure on how or where non-linear editing is carried out.

As is also recited in line 8 of method claim 312, the non-linear editing is claimed as involving the video information in its “digital production format.” In fact, the phrase “*digital production format*” is nowhere recited in the original disclosure as well, yet recited in claims 256, 259, 272, 273, 274, 276, 281, 285, 308, 309, and 312.

Yet further, the broader phrase “*production format*” is only mentioned twice in the original disclosure, namely in col. 2 lines 51 and 55-56, in general terms covered only by the summary of the invention.

Applicant further claims that the non-linear editing is performed on the audio signal as well (in line 9 of claim 256), which is nowhere disclosed in the original specification. The same goes for claim 312. Claim 312 also specifies “receiving” video and audio information, which suggests broadcasting. However, the broadcasting embodiment is limited to the Fig. 7 embodiment, which furthermore fails to discuss audio reception. Applicant may have implied the camera embodiment which also includes an audio pickup, but it is not clear.

Moreover, it is not even clear which embodiment is intended to be described by claim 256. The only embodiment that in some way describes “receiving” is shown in Fig. 7 since it has broadcast reception inputs 212 and 214. However, there is no discussion of audio processing. The Fig. 4 embodiment does not disclose “receiving” by any input stage, any specific audio conversion into a “production format”, nor any audio storage. The audio stage

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136 is discussed in col. 12 lines 4-11 which fails to cover the specifically claimed audio processing.

Another issue is the new language “*when the video information is not received in such a format*” (i.e. the 24 fps format) recited in lines 5-6 of claim 256 and in line 4 of claim 312. Such language implies that at times a video signal actually assumes a 24 fps rate in its transmission state. Applicant does not disclose this in the original disclosure nor is it a typical rate used in A/V communication.

Regarding another matter, claim 258 specifies that the source of the video signal is film having a frame rate of 24 frames/second, but the only time a film rate is disclosed regarding the Fig. 4 embodiment is as an *output* of interface 128. Reception of 24 fps is not disclosed.

Furthermore, applicant appears to incorporate the embodiment of Fig. 4 as single stage 162 into the embodiment of Fig. 6. That cannot be accepted by one of ordinary skill in the art because of what would result in incongruent connectivities. There is no clear nexus between the Fig. 4 embodiment and stage 162 of the Fig. 6 embodiment, considering the additional system components. In fact, Fig. 6 is described as a system of existing *and planned* formats, which admits that physical realization of that embodiment may not be actual.

Furthermore regarding dependent claim 265, a 1920 x 1080 format is recited therein, but that format is only disclosed regarding the Fig. 7 embodiment. That embodiment does not involve audio processing which is recited in base claim 256 and only disclosed in Fig. 4. The Fig. 4 and Fig. 7 embodiments are not compatible.

Regarding another matter, in claim 267 applicant says that conversion is carried out by a graphics processor “*which is incorporated into a general purpose computer*”. That is not

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disclosed in the original specification. The only related discussion is in col. 1 lines 45-48 and lines 53-62 wherein applicant describes what appears as *proposed* systems that are said as not yet feasible. Stated in col. 1 lines 53: “*Although general-purpose PC-based equipment may **never** allow professional-style rendering ...each new generation of microprocessors enables progressively faster, higher-resolution applications. In addition, as prices ... fall, the capacity of such devices has risen dramatically, thereby improving the **prospects** for enhancing PC-based image manipulation system for such applications.*” This language (the bold added by the examiner for emphasis) speaks only of what *may* occur, not what applicant has actually *invented*. Phrases like “*specialized graphics processing capabilities are included in a **high-performance** personal computer or workstation ...*” (col. 2 lines 46-48) and “*the enhancement to a general-purpose **platform** preferably takes the form of a graphics processor ...*” (col. 2 lines 62-64) do not exactly translate to a “general-purpose” computer readily performing the multiple specific enhancements afforded by a graphics processor vaguely incorporated therein.

The other possibly intended correlation is to text in col. 13 lines 34-37. However, that discussion involves the incorporation of a *decompression processor* 222 (in Fig. 7) – not a graphics processor - into a general-purpose computer.

Another matter involves the recited “non-linear transformation” (claims 269, 282 and 291); similarly recited “cropping” (claims 270, 283 and 291); and the claimed “panning and/or scanning” (claim 271). All of these functions are discussed only once in col. 4 lines 23-28, and not in relation to any specific embodiment. Seeing that all four graphics processors 86, 116, 162 and 242 assume forms all different from one another and in different embodiments, it is not

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clear, nor can it be inferred, that any one or all of the graphics processors carry out such resizing. The original specification does not elaborate.

New claim 273 recites “*adding special effects to the video information in its digital production format*”, but only in col. 4 line 57 is the phrase “special effects” mentioned in the original disclosure, and only in the context of special effects (somehow) benefiting from “*the implementation of this system*”. Nothing specific about *adding special effects to the video information in its digital production format* is elaborated on in the rest of the disclosure.

Addressing yet another concern, new claim 274 recites the feature of *adding additional video information o the video information in its digital production format, and wherein the additional information has the same digital format as the video information n its digital production format*. There is no disclosure that describes any adding of video data to the video production data. The only possible reference to any combining s the remixing of RGB data which is only limited to stage 120 of Fig. 4, and which is not really an “*adding*” operation. It involves separation and recombining (mixing) of the same data, and is limited to *analog* data (col. 11 lines 13-23).

As for new claims 276 and 285, they too recite new matter. Applicant recites capturing done by a camera (claim 285 which is similar to claim 276 and therefore implying a camera; the other non-camera embodiments not disclosing or suggesting such) with subsequent recording and conversion processing, of which *only* the embodiment of Fig. 2a covers. (It is also noted that “capturing” is not expressly recited anywhere in the original disclosure.) It is pointed out that only the Fig. 2a embodiment includes recording (stage 8) which incorporates graphics processing (stage 82 in Fig. 3). The alternate camera embodiments shown in Figs. 2b and 2c do *not* include

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the recording stage. Their digital processing is either output directly or first converted to analog form. Only the Fig. 2a camera includes any subsequent processing including recording and conversion.

Moreover, the format used by the camera is limited exclusively to PAL/HDTV formats (col. 6 lines 25-32). Therefore, the claimed capturing at a frame rate of 24 frames/second (recited in both independent claims 276 and 285) cannot be supported by the original disclosure.

Furthermore, the graphics processor (specifically recited in claim 276; implied in parallel claim 285) is said to perform specific frame rate and size conversion, but the graphics processor 82, unique to the camera embodiment is never disclosed as performing these operations. The only text describing graphics processor 82 spans lines 9-21 in col. 9, which does not specify or imply such conversion operations. Moreover, the graphics processor requires *dedicated* hardware (col. 9 lines 9-15).

Along with this, there is no disclosure of recording stage 8, unique to the camera of Fig. 2a, as recording at 24 fps.

In addition, dependent claims 284 and 293 recite a 1920x1080 format which is disclosed only involving the Fig. 7 embodiment (col. 14 line 5). If the camera embodiment is described by claims 276 and 285, then these dependent claims cannot further limit their respective base claims.

Yet further, the other graphics processors, regardless of their capabilities, cannot be considered by one of ordinary skill in the art as capable of being substituted for graphics processor 82. They all have exclusively distinct input/output connectivities unique to each other. Camera graphics processor 82 *only* has single RGB input and single RGB output capabilities as

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disclosed (with alternative color formats). Graphics processor 116 in Fig. 4 far exceeds that of processor 82 in terms of available inputs and/or outputs, as does stage 162 in Fig. 6. The arrangement shown in Fig. 7 is beyond the camera stage (as are the other embodiments) and involves a graphics processor 242 yet further different from the camera processor 82. The original disclosure fails to describe a connection between the embodiments. The arrangement in Fig. 4 is introduced as showing “*components that comprise a multi-format audio/video production system*” (col. 9 lines 39-40). The next line states “*As in the case of the computer disk-based recording system of Fig. 3, ...*” which is language presuming a different - rather than overlapping, elaborated on, or incorporated system – than that of the previously described (camera) system.

Turning to claim 296, “a compressed digital audio format” is nowhere disclosed in the original disclosure. Moreover, the claimed “interleaving” of audio with video data is not definitely the same as “intermixing” (disclosed in col. 12 lines 4-11).

Addressing claim 316, applicant claims specific RGB processing as a process involving data captured by the camera. However, that RGB-to-Y matrixing is disclosed as *only* involving stage 120 of the multi-format A/V production embodiment of Fig. 4 (col. 11 lines 13-23). It is clear that graphics processor 82 of camera 2a is wholly different from graphics processor 116 which includes interface 120, both as they appear in the Figures and as they are described in the original disclosure.

Likewise regarding claim 317, since the RGB-to-Y matrixing is disclosed as *only* involving stage 120 of the multi-format A/V production embodiment, it is not explained how two graphics processors are recited (lines 3 and 18). None of the embodiments of Figs. 2a

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(incorporating Fig. 3), 4, 6 and 7 seem capable of working as united systems because they all incorporate different respective graphics processors. It is not clear which embodiment is in view, particularly when only stage 120 contains the RGB processing shown in Fig. 5.

Moreover, the second graphics processor recited in line 18 (apparently not the same as the first) is stated to operate on R" G" B" components, but that is not disclosed in the original disclosure.

Raising another issue that constitutes new matter, applicant now includes the phrase *"when the video information is not received in such a format"* (that format being of a 24 frame/second rate). Such is recited in new claims 256 and 312, but the embodiments that may have been intended to be covered by these claims (Fig. 4? Fig. 6?) do not involve reception of that format. Only the Fig. 6 embodiment includes an initial 24 frame/sec format and that is not disclosed as being "received" (applicant dedicates only one paragraph to the discussion of Fig. 6). The only arrangement that involves reception is that of Fig. 7 which receives standard broadcast video, which is *not* in a film frame format.

12. Claims 256-259, 264-277, 281-286 and 289-319 are further rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As discussed above, all of the claims were presented new with the amendment of 12/03/04, and were additionally amended and added to on 10/03/05. These claims have been

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shown to constitute new matter (explained above), and as such, the original disclosure does not enable one of ordinary skill in the art to make and use the newly-defined invention. Since the original disclosure lacks express language accounting for the claimed subject matter, then the claimed invention has not been adequately disclosed to enable one of ordinary skill in the art to make and use the claimed invention. Whatever language covering certain features may exist does not adequately tie together the composite embodiments defined by the newly drafted claims.

There is no express description or inferential language that allows one of ordinary skill in the art to make permissible connections among the embodiments shown in Figs. 2a, 4, 6 and 7:

Fig. 2a *only* goes with Fig. 3, and the camera *only* provides PAL or HDTV formatted data;

Fig. 5 *only* goes with stage 120 of Fig. 6;

The specific relationship between Fig. 4 and Fig. 6 is not adequately explained in so far as how the entirety of the Fig. 4 arrangement is readily fitted into stage 162 of Fig. 6 regardless of the multitude of accessories. (The disclosure of Fig. 6 is limited to a single paragraph spanning lines 24-39 in col. 12.);

Fig. 7 *only* permits *conventional* broadcast or the information highway as processable inputs. Transmission at a 24 fps film frame rate is not used in broadcasting;

Fig. 6 *only* allows for film frame rate data to be processed.

Moreover, all three evidently disconnected systems incorporate graphics processors that differ from one another significantly. The camera embodiment processor 82 *only* operates on RGB or other color components (col. 9 lines 11-15) and has a single input and single output, as

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shown. The graphics processor 116 of the multi-format A/V production system of Fig. 4 includes plural interfaces that accommodate a multitude of analog and digital inputs and outputs (how the interface are incorporated into a unitary component 116 is not disclosed but shown as stacked components). How the graphics processor of Fig. 4 is somehow incorporated into stage 162 in the Fig. 6 arrangement which has a single output bus line to plural accessories is not explained. That graphics processor only accommodates film rate input formats. And graphics processor 242 of the “complete TV production system” depicted in Fig. 7 provides only a single output comprising analog/composite output.

Yet further, and as was also pointed out by the previous examiner, the capabilities of general-purpose computers at the time of filing were limited. That examiner cited the following language from “Solution 3 – The Standard Platform” from page 2/9 of the publication “*NON-STANDARD PLATFORMS – READY FOR THE DIGITAL ERA*” by Owen et al. of “Quantel Limited” dated 11/24/94, which is *subsequent* to applicant’s effective filing date:

“Standard computers do not offer digital video inputs and outputs and few, if any, parts of the system can run at real time video rates. But, as shown in figure 4, a whole system can be configured, involving the processors and RAM as well as specialist hardware such as disks, to handle video data and cards to provide video I/O. At this point the platform may no longer be capable of running a full range of software packages – some parts requiring reconfiguration for other applications. Clearly this is no longer a standard

platform.”

Furthermore, in consideration of what applicant purportedly invented involving video and film post-production system supposedly based on general-purpose computers, the following citation from the abstract on page 442 of the publication “*The Digital Transformation of Hollywood: Format and Resolution Independent Digital Post-Production*” by Epstein et al. was also submitted by the previous examiner:

“With the constant increase in general purpose computational power, many digital post-production systems are now being based on general purpose, commercially available computer systems rather than proprietary ones. The rate at which film and video post-production is digitally processed in proportion to the use of general purpose computers in this industry.”

Applicant proposes as his invention (noting the first paragraph in the Summary of the Invention):

“The present invention takes advantage of general-purpose hardware where possible to provide an economical multi-format video production system. In the preferred embodiment, specialized graphics processing capabilities are included in a high performance personal computer or workstation, enabling the user to edit and manipulate an input video program and produce an output version in a final format that may have a different frame rate, pixel dimensions, or both.”

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In light of the two citations quoted above and based on what applicant purports as his invention, applicant's disclosure in essence amounts to nothing more than what was acknowledged as the state of the art regarding post-production using general purpose hardware. Applicant's disclosure does not add anything specific beyond a review of various known and proposed video formats. The supposed key feature of the graphics processor is never expressly disclosed beyond that which applicant describes as "dedicated hardware," where only once is any specific mention made of actual processing hardware, namely a standard convertor by Snell & Wilcox (col. 10 line 65). However, that piece of hardware (argued by applicant is the response of 06/01/04) is specific *only* to converting standards – not to "graphics processing" per se.

In light of the disparate graphics processors incorporated in the different respective embodiments limited to specific formats, and in light of the lack of express graphics processing despite the various input/output connections, applicant has in effect disclosed nothing more than an invitation to experiment with software and hardware, which is not enough to enable one of ordinary skill in the art to make and use his invention.

13. The references listed on the attached PTOL-892 form may or may not already be of record.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 256, 258, 259, 266, 268-274, 294-303 and 311 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein et al. in view of Spoer and in view of Hioki et al.

The digital post-production system of Epstein (e.g. Abstract) includes obtaining (i.e. receiving) media from various sources characterized by different formats (2nd col. on page 443), including film, which is characterized by a 24 frame/sec rate, and involves conversion from analog to digital form, if not already in digital form (1st col. on page 442). Included in the digital production is RAID storage (1st col. on page 442 and page 444) that is randomly accessible. The resulting edited signal is eventually displayed (2nd col. on page 442).

Although Epstein does not expressly disclose the typically accompanying audio component of a film or video signal, it would nonetheless have been obvious to include such well-known auxiliary data, as disclosed by Hioki (e.g. Abstract) which would thereby complete the A/V programming.

Moreover, Epstein also points out that he can transform any imagery to any other desired output format and resolution “easily,” and can involve “creative manipulation” (2nd col. on page 443). Epstein also mentions various linear and non-linear processing in the post-production stage (col. 1 on page 443).

In view of this and in view of the fact that Spoer (who also discloses digital production involving conversion of different formats into others) includes non-linear editing (transforming) like panning (page 221), it would therefore have been obvious to incorporate any suitable linear or non-linear manipulation in Epstein/Hioki, for the clear benefit of providing the post-production operator with as large a range of editing options possible, such being a typical desire of the studio operator, thereby meeting claim 256.

As for claim 258, Epstein (as well as Spoer) mentions a film source as an option for editing, which format is inherently characterized by a 24 frame/sec rate, as noted above.

As for claim 259, both Epstein and Spoer disclose component format (2nd col. page 43 of Epstein; Figure 1 of Spoer).

Regarding claim 266, this claim is met because the alternative option of “equal to” the 24 frame/sec rate (recited in base claim 256) is met by Epstein.

As for claim 268, both Epstein and Spoer disclose conversion into different horizontal/vertical dimensions, and therefore aspect ratios.

As for claims 269-271, zooming (which essentially crops an image) would have been obvious to incorporate in Epstein because he allows for any format conversion and various image manipulation (as noted previously), and Spoer discloses zooming as well as panning, and in fact leaves it open for other manipulations (page 221 of disclosed by Spoer).

Regarding claim 273, Epstein also discloses the post-production options of water ripples, dissolves and other special effects (1st col. on page 443).

As for claim 274, painting, rendering, color correction (all specifically mentioned by Epstein) all involve the addition of video data which is carried out in the post-production operation to the subject video data. The same formats would normally be used (to enable the per pixel manipulation per respective image area).

As for claims 294 and 295, again, Epstein points out that any image format can be converted into any other size and resolution, and Spoer also discloses (but not exclusively) plural formats and lists some specific parameters. It would have been obvious to one of ordinary skill

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in the art to edit or display any two-dimensional image of a reasonable manipulatable size, such as 1280 x 720, which assumes the well known 16:9 widescreen (high-definition) format.

Considering claim 296, inclusion of accompanying audio with the video signal component would have been obvious, as explained above. The compression of both, as disclosed by Hioki (noting Fig. 7), would also have been obvious to use for the clear benefit of providing the ability to process a greater effective amount of data by only processing an actual lesser amount thereof.

As for claim 297, Spoer expressly mentions an HDTV format, and Epstein allows for any of plural (open-ended) formats.

As for claims 298 and 299, television involves non-square pixels, and graphics involves square pixels, and Epstein discloses both.

Looking at claims 300-303, plural display formats are suggested by Epstein, and Spoer discloses plural raster formats and display modes as well. Included as options are selection among different aspect ratios and/or frame rates (video, film, PAL and NTSC).

Regarding claim 311, the 2048 x 1152 format of Spoer (No. 9 listed in Table 2) is a standard 16:9 (widescreen) format. Some of the additionally listed formats also exceed the traditional 4:3 format.

16. Claim 265 is rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein in view of Spoer and Hioki, in further view of Wilkinson '464.

As explained above, both Epstein and Spoer allow for any of plural editing and display formats to be adopted (standard including PAL, NTSC, 16:9 widescreen, European HDTV, etc).

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It would have been obvious to include any workable format since the studio operator typically prefers an exhaustive list of options in such a creative environment. Therefore, any 4:3 or 16:9 aspect ratio format, such as 1920 x 1080 as disclosed by Wilkinson (col. 3 line 51) in his system would have been an obvious selection. He also discloses generating a common 24/frame/sec post-production format for editing (col. 1 lines 28-35).

17. Claim 267 is rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein in view of Spoer and Hioki, in further view of Six.

In view of the fact that complicated data manipulation tests the limits of a general-purpose computer which prompts the development of an increase in computational power (Abstract of Epstein), it would accordingly have been obvious to incorporate dedicated or adaptable graphics processing, as disclosed by Six in his modified computer (introduction starting in the 1st col. on page 835; the GP chip disclosed in col. 2).

18. Claims 276 and 285 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer in view of Six.

Schafer discloses, as one input source option, a digital camera capable of generating a 24/frame/sec video rate (1st paragraph on page 12/1); a digital recording therefore (list of system elements on the bottom of page 12/4) that stores the input video format in the 24 f/s rate (e.g. penultimate paragraph on page 12/3); plural high-capacity disks to choose from (high-resolution intermediate system Fig. 5); and subsequent processing for display (page 12/5).

Schafer discloses a post-production work station (noting again Fig. 5), but does not expressly describe a graphics processor. He does, however, disclose editing involving computer-created graphics (2nd paragraph on page 12/5).

As explained above, complicated data manipulation tests the limits of a general-purpose computer which prompts the development of an increase in computational power, so it would accordingly have been obvious to incorporate dedicated or adaptable graphics processing, as disclosed by Six in his modified computer (introduction staring in the 1st col. on page 835; the GP chip disclosed in col. 2). The processing of Schafer can involve resolutions exceeding 2000 lines (which is above the standard traditional and widescreen formats: 1st paragraph on age 12/5), thereby meeting claims 276 and 285.

19. Claims 284 and 293 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer and Six, in further view of Wilkinson.

Since Schafer discloses editing resolutions at least at 2000 lines, it would have been obvious to include any workable format since the studio operator typically prefers an exhaustive list of options in such a creative environment. Therefore, any 4:3 or 16:9 aspect ratio format, such as 1920 x 1080 as disclosed by Wilkinson (col. 3 line 51) in his system would have been an obvious selection. Wilkinson in fact also discloses generating a common 24/frame/sec post-production format for editing (col. 1 lines 28-35).

20. Claims 281, 290 and 304-309 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer and Six, in further view of Epstein.

Since Schafer proposes plural video and film formats which differ in both frame rates, line counts and aspect ratios, it would therefore have been obvious to edit formats of any available formats in post production as allowed by Epstein. Included as options are selection among different aspect ratios and/or frame rates (video, film, PAL and NTSC).

21. Claims 282, 283 and 292 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer, Six and Epstein, in further view of Spoer.

Schafer expressly allows for special effects and gives examples of some (1st two paragraphs on page 12/5). zooming (which essentially crops an image) would have been obvious to incorporate in because the system (as modified by Epstein) allows for any format conversion and various image manipulation (as noted previously), and Spoer discloses zooming as well as panning, and in fact leaves it open for other manipulations (page 221 of disclosed by Spoer).

22. Claims 289 and 310 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer and Six, in further view of Hioki et al.

Schafer discloses digital recording including tape and disk media. It would have been obvious to use well-known optical (or magnetic) disks as disclosed by Hioki (Fig. 7) as an available option since they can be readily incorporated in work stations for selective accessing of the data stored thereon.

Regarding claim 310, typical film and video data include accompanying audio data to complete the programming, as discussed previously. Knowing such, it would have been obvious

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to include audio pick-up with the camera of Schafer for the benefit of eventually providing the user with a complete audio/visual program, as is disclosed by Hioki (noting again Fig. 7).

23. Claims 312-315 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein in view of Spoer and in view of Six.

As discussed above, Epstein operates in the 24 frame/sec format in the post-production stage. Epstein also points out that any image format can be converted into any other size and resolution, and Spoer also discloses (but not exclusively) plural formats and lists some specific parameters. It would have been obvious to one of ordinary skill in the art to edit or display any two-dimensional image of a reasonable manipulatable size, such as 1280 x 720, which assumes the well known 16:9 widescreen (high-definition) format in Epstein, using the programmable processing of Spoer.

Furthermore, it would have been obvious to include store accompanying compressed audio with the compressed video of Epstein, as disclosed by Six, who includes a graphics processor with an audio stage (Fig. n:3 on page 837) that operates on a DPCM code (2nd col. on page 837). Both Epstein and Spoer disclose linear and non-linear editing.

As for claim 313-315, Epstein (1st col. on page 443) and Spoer cover the standard A/V source providers including cable, network and broadcast. Spoer explicitly allows for any I/O interfacing to all kind of digital and analog equipment (bottom of Page 222), and satellite was a well-known A/V source medium at the time of filing.

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24. Claims 316-319 appear allowable over the prior art (but are rejected under 35 USC 112, as explained above).

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is (571) 272-7348. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Or faxed to:

(571) 273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (703) 308-HELP.



Victor R. Kostak
Primary Examiner
Art Unit 2622

VRK